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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/814,362	03/21/2001	Lucas M. Jenison	10559-379001	3922

20985 7590 01/14/2005

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EXAMINER
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FLEMING, FRITZ M

ART UNIT	PAPER NUMBER
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2182

DATE MAILED: 01/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/814,362

Applicant(s)

JENISON ET AL.

Examiner

Fritz M Fleming

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.


- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 October 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

  
FRITZ FLEMING  
PRIMARY EXAMINER  
GROUP 2100

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments filed 10/22/2004 have been fully considered but they are not persuasive. First of all, the substantial amendments to the claims have overcome the outstanding non-art rejections. However, the amended claims allow for the rejection below, based upon the reasoning presented below. The analysis below is an interpretation of the breadth of the claims, and not a rejection on non-art grounds. Turning to claim 1, the "marking" occurs in a vacuum, as the "processing" is not related in any specific manner to the "marking", such that the "flagging" is not given a cause and effect relationship with the marking. There is no limitation to preclude any copying of the marked or flagged packet(s) to a buffer or memory. The second time is not related to the first, just that it happens later. The "flag removal" is just that and does not address or limit any copying of data to any sort of buffer or memory. Claim 8 is broader in scope, and the "marking" is not related to any specific condition. The "flagging" does not require each subsequent packet be flagged, just that more than one after the marked one be. At a later time when resources are available, the flags are removed, without any limitations precluding copying at any or plurality of times to a buffer or memory. There is also no negative resource condition, in that the method simply hangs if the resources are not available. Most likely, the claims should be given an "if/then/else" sort of format to better limit the claim language. Finally, claim 14 is interpreted along the lines of claim 1, noting the difference is in the machine-readable

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storage medium. Thus, the claims do not preclude what the goal of applicants' disclosure is, that being a reduction in the number of data copies.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 8-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Burrows.

In Burrows, attention is directed to a method of transferring data packet in accordance with Figure 5 and Third Network Controller per column 8, lines 47+. Note that normal operations of the network controller are set forth at column 5, lines 9-53, in which the last cell of a packet is received by the controller 150, after the data portion has been copied to buffer 162 (column 4), the data packets are processed via decryption circuit 180 and then transmitted to the host computer 120. However, per the third network controller, when a low resource condition is determined to exist (i.e. number of unused blocks falls below a predefined threshold), the control logic 302 selects the partial data packet referenced at the bottom of the packet entry list, and then transmits the partial packet to the host 120 where it is stored at the memory 21, with a particular marking provided by the "partial data packet message" sent to host 120, and the setting of the partial transfer status flag P in the packet entry 170, thereby providing a flagging of subsequent packets, as if the buffer 162 reaches overflow again before the end of the

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partially transferred packet is received, subsequent portions of that same packet may be sent to the host using the same method, thereby making it possible for a data packet to be sent to the host in several pieces. Once the end of the end of packet is received by the host controller 300, the control logic 302 looks to see if the flag P of packet entry 170 was set, the rest of the completed data packet is sent to the host without decrypting and stored in memory 212, along with the end of data packet message. Then the packet is sent via loopback interface 314 to FIFO 316, where the decryption 180 and CRC 182 process the data to send back to the host 120, such that no packets are deleted. Thus it is seen that after the data packets have been sent back after a partial transfer, wherein the partial transfer represents the marking and subsequent flagging, the complete data packets then routed through 180,182 and 184 per the normal operations set forth above, which is thus the subsequent removal of the flagging in a condition of resource availability due to the lack of buffer overflow. Per claim 9, the buffer overflow is a low resource condition. Per claim 10, the copying to the host is carried out when the complete data packets are routed through 180,182 and 184 after a partial transfer.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 1-7 and 11-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burrows in view of the admitted prior art.

Burrows specifically uses a network controller, but fails to use the "shared memory" terminology for the buffer 162.

The admitted prior art spanning [0002-4] sets forth that it is old and well known to transfer data between the network and a shared memory subsystem, wherein the shared memory is used by different devices to include the system CPU and I/O devices and the network controller, packet descriptors are used to describe the specific

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information about the packet, that all packets should be delivered in the order they were received, packets can reside in the shared memory until copied to the host memory, and when resources run low, packets are copied in to the OS buffers.

Therefore it would have been obvious to one having ordinary skill in the art at the time that the invention was made to modify the teachings of Burrows per the teachings of the admitted prior art so that the network controller uses a shared memory so that the data can be accessed by several different devices like the system CPU, I/O devices, and disks and the network controller. Thus when the memory 162 of the network controller of Burrows is a shared memory, the rest of the teachings of Burrows set forth the claimed subject matter as set forth above in relation to claims 8-10. Note that the initial buffer overflow is a low resource at a first time, resulting in the detailed above marking, processing through 304 and 184 to the host, checking resources at a second time when the data has been sent via loopback, and the removal of the partial transfer flag P when the data packets are processed through 302, 180, 182 and 184 back to host 120. Per claim 2, the data is received at 152 and copied to the shared memory 162. Provision of a software driver with descriptors is well known per the admitted prior art per claim 3. Per claim 4, such is done by Burrows when no overflow exists. Per claim 5, a processing determination is made by the end of data packet sent to the host. Per claim 6, such is done under normal circumstances. Per claim 7, the array is received at 152. Per claim 11, 162 is called a shared memory when combined with the prior art where the received data packets are copied. Per claim 12, such is done under normal circumstances. Per claim 13, the marked specific packet and the subsequently

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received packets are included in the loopback array, which are then processed per 302, 180, 182 and 184 back to the host. Claims 14-18 parallel claims 1 and 3-6, and are rendered obvious as when carried out by the combined teachings, a computer readable medium is needed to have the network controller and host operate as described. Claim 19 is rendered obvious by the copying to buffer 316 after the data has been looped back as a result of having been flagged, as well as the flagged packets being copied to a buffer in memory 212, awaiting the loop back. Claim 21 is rendered obvious when the looped back data has been processed via normal conditions under no overflow resulting in unflagged data being copied to host memory at 212.

### ***Conclusion***

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.




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This rejection is properly made final, as the originally filed claims were given an examination on the merits, and the amended claims required a new grounds of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fritz M Fleming whose telephone number is 571-272-4145. The examiner can normally be reached on M-F, 0600-1500.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Gaffin can be reached on 571-272-4146. The fax phone number for the organization where this application or proceeding is assigned is 571-272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Fritz M Fleming  
Primary Examiner  
Art Unit 2182

fmf